

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)
2. (Previously Presented) The nucleic acid molecule of claim 11, where the nucleic acid molecule is purified from a mammal.
3. (Canceled)
4. (Previously Presented) A nucleic acid probe comprising a nucleotide sequence that encodes a polypeptide comprising at least 10 contiguous amino acids of SEQ ID NO: 1.
5. (Previously Presented) A nucleic acid vector comprising the nucleic acid probe of claim 4 and a promoter effective to initiate transcription in a host cell.
6. (Previously Presented) A recombinant cell or tissue comprising the nucleic acid probe of claim 4.
- 7-10. (Canceled)
11. (Amended) An isolated, enriched, or purified nucleic acid molecule comprising a nucleotide sequence that:
 - (a) encodes a Fibroblast Growth Factor Receptor Protein Kinase Substrate 2 (FRS2) polypeptide having the full length amino acid sequence set forth in SEQ ID NO: 1;
or
 - (b) is the complement of the nucleic acid sequence of (a);
 - (c) ~~encodes a FRS2 polypeptide having at least 90% sequence identity to the amino acid sequence set forth in SEQ ID NO: 1 and having FRS2 activity;~~

~~(d) — encodes a FRS2 polypeptide having the full length amino acid sequence of the sequence set forth in SEQ ID NO: 1 except that it lacks at least one, but not all, of the following segments of amino acid residues: 1-10, 11-152, or 153-508;~~

~~(e) — is the complement of the nucleic acid sequence of (d);~~

~~(f) — encodes a polypeptide having the amino acid sequence set forth in SEQ ID NO: 1 from amino acid residues 1-10, 11-152, or 153-508;~~

~~— (g) — is the complement of the nucleic acid sequence of (f);~~

~~(h) — encodes a polypeptide having the full length amino acid sequence set forth in SEQ ID NO: 1 except that it lacks one or more of the domains selected from the group consisting of a myristylation region, a phosphotyrosine binding region, and a C-terminal region;~~

~~(i) — is the complement of the nucleic acid sequence of (h);~~

~~(j) — encodes a polypeptide as set forth in (a), (d), or (f) containing one or both of the following mutations: tyrosine 349 to phenylalanine or tyrosine 392 to phenylalanine; or~~

~~(k) — the complement of the nucleic acid sequence of (j).~~

12. (Previously Presented) A nucleic acid vector comprising a nucleic acid molecule of claim 11.

13. (Previously Presented) A recombinant cell or tissue comprising a nucleic acid molecule of claim 11.

14.-19. (Canceled)

20. (Previously Presented) The nucleic acid molecule of claim 11, wherein said nucleic acid molecule is fused to a nucleic acid molecule encoding a second protein.

21. (Amended) The nucleic acid molecule of claim 20, wherein said second protein is selected from the group consisting of hemagglutinin, GST, maltose binding-protein, or a fragment of any one of said second ~~polypeptides~~ proteins.

22. (Amended) The nucleic acid probe of claim 4, wherein said probe comprises a nucleotide sequence that encodes a polypeptide comprising at least 100 contiguous amino acids of SEQ ID NO: 1.

23. (Previously Presented) The nucleic acid molecule of claim 20, wherein said nucleic acid molecule encodes a FRS2 polypeptide having the full length amino acid sequence set forth in SEQ ID NO: 1.

24. (New) A nucleic acid probe comprising a nucleotide sequence that encodes a polypeptide comprising at least 10 contiguous amino acids of SEQ ID NO: 1, wherein said probe binds to a DNA molecule or an RNA molecule encoding FRS2 polypeptide.

25. (NEW) The isolated, enriched, or purified nucleic acid molecule of claim 11, wherein said nucleic acid molecule comprises a nucleotide sequence that:

(a) encodes a FRS2 polypeptide having the full length amino acid sequence of the sequence set forth in SEQ ID NO: 1 except that it lacks at least one, but not all, of the following segments of amino acid residues: 1-10, 11-152, or 153-508; or

(b) is the complement of the nucleic acid sequence of (a).

26. (NEW) The isolated, enriched, or purified nucleic acid molecule of claim 11, wherein said nucleic acid molecule comprises a nucleotide sequence that:

(a) encodes a polypeptide having the full length amino acid sequence set forth in SEQ ID NO: 1 except that it lacks at least one, but not all of the domains selected from the group consisting of a myristylation region, a phosphotyrosine binding region, and a C-terminal region; or

(b) is the complement of the nucleic acid sequence of (a).

27. (New) The isolated, enriched, or purified nucleic acid molecule of claim 11, wherein said nucleic acid molecule comprises a nucleotide sequence that encodes a FRS2 polypeptide which has at least 90% sequence identity to the amino acid sequence set forth in SEQ ID NO: 1 and regulates growth factor stimulation of cellular differentiation and cellular proliferation;

28. (New) The isolated, enriched, or purified nucleic acid molecule of claim 11, wherein said nucleic acid molecule comprises a nucleotide sequence that:

(a) encodes a polypeptide having the amino acid sequence set forth in SEQ ID NO: 1 from amino acid residues 1-10, 11-152, or 153-508; or

(b) is the complement of the nucleic acid sequence of (a).

29. (New) The isolated, enriched, or purified nucleic acid molecule of claim 11, wherein said nucleic acid molecule comprises a nucleotide sequence that:

(a) encodes a polypeptide as set forth in claim 11 (a), claim 25 (a), or 28 (a) containing one or both of the following mutations: tyrosine 349 to phenylalanine or tyrosine 392 to phenylalanine; or

(b) is the complement of the nucleic acid sequence of (a).